How to Conduct an Aquatic Plant Survey

Purpose:

Surveying of a lake or pond to document aquatic plant growth serves several purposes. Consistent surveying provides objective baseline data. Because memories are subjective different people will remember different amounts and locations of plant growth, thus often giving contradicting accounts of the past. By repeatedly surveying an area to document the types and densities of aquatic plants present, a more accurate long-term perspective can be attained.

With good baseline aquatic plant data, ongoing long-term processes can be identified and tracked, and unique lake or pond resources identified and better protected. For example, areas with increased nutrients may exhibit increased plant growth over time, or areas of sedimentation can be identified. Regular surveying may document or track rare or endangered plant species.

Early detection of invasive exotic plants is likely with regular surveying. Early detection can prevent an infestation from spreading within a lake, pond, or river, or to other waterbodies. Once an infestation is present, surveys are a necessary tool to determine the most appropriate control methods.

Recommended methods:

Essential tools include a boat, plant key or guide, paper/writing utensil, map of waterbody, and plastic zip-lock bags (optional: rake for pulling up plants, polarized sunglasses, snorkel gear, view scope- see insert and attached instructions). Surveys are best conducted with at least one other person; one person steers the boat while the other can look for aquatic plants.

A homemade aquatic plant view scope (or "stanglescope")

Choose a calm day for best visibility. Boat around the shoreline of the lake and out to as deep as plants are growing (or as deep as you can see), and note the plant species and their density (either directly on your map, or make numbered sections and take corresponding notes on other paper). Pay special attention to boat access areas, inlets and outlets, shallow bays, and any flow-restricting structures such as dams. Notes about shoreline vegetation, development, or any other factors that may affect the quality of the water are also valuable.

If you are not sure what species a plant is, pull one out of the water for further examination (the rake is helpful in deep water). If you are still unable to identify a plant, or suspect that it is an exotic invasive species that has not been identified in the waterbody previously, put a representative piece in a wet paper towel and a plastic ziplock bag. Mail the sample to the Vermont Water Quality Division at the address below:

Department of Environmental Conservation
Water Quality Division
103 South Main Street, 10 North
Waterbury, VT 05671
802-241-3777

Aquatic plant Identification guides:
Aquatic and Wetland Plants of Northeastern North America/ Crow & Hellquist, 2 volumes
Lake and Pond Plants (booklet)/ S. Warren, Available from VT DEC, Water Quality Division